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United States Patent [19][11] **Patent Number:** **5,485,174****Henshaw et al.**[45] **Date of Patent:** **Jan. 16, 1996**[54] **DISPLAY IMAGE SCROLL CONTROL AND METHOD**[75] Inventors: **Susan F. Henshaw**, Raleigh; **Sarah D. Redpath**, Cary, both of N.C.[73] Assignee: **International Business Machines Corporation**, Armonk, N.Y.[21] Appl. No.: **973,929**[22] Filed: **Nov. 12, 1992**

OTHER PUBLICATIONS

"Microsoft OS/2 Programmer's Reference, vol. 1", Microsoft Corp. 1989, Cover & Title Page, Notices, pp. 54-75, 96, 178, 392-423.

"Microsoft OS/2 Programmer's Reference, vol. 2", Microsoft Corp. 1989, Cover & Title Page, Notices, pp. 55-57, 196-197, 332, 419-420, 424-425, 439, 444, 466.

Primary Examiner—Ulysses Weldon*Assistant Examiner*—Matthew Luu*Attorney, Agent, or Firm*—Edward H. Duffield

Related U.S. Application Data

[63] Continuation of Ser. No. 636,655, Dec. 31, 1990, abandoned.

[51] **Int. Cl.⁶** **G09G 5/34**[52] **U.S. Cl.** **345/123; 345/115; 345/127**[58] **Field of Search** 345/115, 119,
345/120, 123, 127, 129, 130; 395/156,
157[56] **References Cited****U.S. PATENT DOCUMENTS**

| | | | |
|-----------|---------|------------------|---------|
| 4,786,897 | 11/1988 | Takanashi et al. | 340/721 |
| 4,823,303 | 4/1989 | Terasawa | 340/724 |
| 4,831,556 | 5/1989 | Oono | 340/723 |
| 5,187,776 | 2/1993 | Yanker | 395/157 |

FOREIGN PATENT DOCUMENTS

0200393 8/1989 Japan 340/727

[57] **ABSTRACT**

Scrolling of work objects displayed on a computer display screen is controlled by a control element window displayed simultaneously on the display screen with the work area which is to be scrolled. A reduced size representation of the overall dimensions of the work object with the work area viewing portion of reduced size superimposed over it are displayed in a second window or display area on the screen. Cursor selection or movement of the reduced size representation of the work area within the representation of the overall work object by cursor selection and dragging or by activation of incremental scrolling or directional scrolling buttons displayed within the second display area, controls the portion of the overall work object displayed within the first display area.

12 Claims, 9 Drawing Sheets